Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of:	)	
	)	
Amendment of Part 90 of the Commission's Rules to Permit Terrestrial Trunked Radio (TETRA) Technology	)	WT Docket No. 11-69
	)	
Request by the TETRA Association for Waiver of Sections 90.209, 90.210 and 2.1043 of the Commission's Rules	)	ET Docket No. 09-234
	)	

COMMENTS OF
THE NATIONAL PUBLIC SAFETY TELECOMMUNICATIONS COUNCIL

The National Public Safety Telecommunications Council (NPSTC) submits these Comments in response to the Commission's Notice of Proposed Rulemaking (NPRM) in the above-captioned proceeding.[1] In these comments, NPSTC addresses issues surrounding interoperability and potential low site/high site interference. The Commission specifically requested comment on these issues in the NPRM.

[1] *Notice of Proposed Rulemaking and Order* in the matter of Amendment of Part 90 of the Commission's Rules to Permit Terrestrial Trunked Radio (TETRA) Technology (WT Docket No. 11-69) and Request by the TETRA Association for Waiver of Sections 90.209, 90.210 and 2.1043 of the Commission's Rules (ET Docket No. 09-234), released April 26, 2011.

The National Public Safety Telecommunications Council

The National Public Safety Telecommunications Council is a federation of public safety organizations whose mission is to improve public safety communications and interoperability through collaborative leadership. NPSTC pursues the role of resource and advocate for public safety organizations in the United States on matters relating to public safety telecommunications. NPSTC has promoted implementation of the Public Safety Wireless Advisory Committee (PSWAC) and the 700 MHz Public Safety National Coordination Committee (NCC) recommendations. NPSTC explores technologies and public policy involving public safety telecommunications, analyzes the ramifications of particular issues and submits comments to governmental bodies with the objective of furthering public safety telecommunications worldwide. NPSTC serves as a standing forum for the exchange of ideas and information for effective public safety telecommunications.

The following 15 organizations participate in NPSTC:

American Association of State Highway and Transportation Officials
American Radio Relay League
Association of Fish and Wildlife Agencies
Association of Public-Safety Communications Officials-International
Forestry Conservation Communications Association
International Association of Chiefs of Police
International Association of Emergency Managers
International Association of Fire Chiefs
International Municipal Signal Association
National Association of State Chief Information Officers
National Association of State Emergency Medical Services Officials
National Association of State Foresters
National Association of State Technology Directors
National Emergency Number Association
National Sheriffs' Association

Several federal agencies are liaison members of NPSTC. These include the Department of Homeland Security (the Federal Emergency Management Agency, the Office of Emergency Communications, the Office of Interoperability and Compatibility, and the SAFECOM Program; Department of Commerce (National Telecommunications and Information Administration); Department of the Interior; and the Department of Justice (National Institute of Justice, CommTech Program). NPSTC has liaison relationships with associate members, the Telecommunications Industry Association, the Canadian Interoperability Technology Interest Group, the National Council of Statewide Interoperability Coordinators and the Utilities Telecom Council.

NPSTC Comments

NPSTC has a long history of supporting the introduction of new technologies to help meet public safety needs. We have been fully engaged in recommending policies and rules for a nationwide interoperable broadband network at 700 MHz, in advancing awareness and understanding of the narrowbanding requirement in the bands below 512 MHz, and in many other initiatives of importance to public safety. In any introduction of new technology, two of NPSTC's key concerns are: the advancement of interoperability, and the prevention of interference to current or proposed public safety operations.

NPSTC submitted comments last year in response to the Commission's Public Notice regarding the TETRA Association's request for waiver. In those comments, NPSTC noted that interference potential is affected both by the technology and the spectrum environment in which it is introduced, and therefore recommended that a full rulemaking proceeding would be a more appropriate vehicle than a waiver in which to consider the relief being requested by the TETRA Association.[2] NPSTC thanks the Commission for positively considering that recommendation and

[2] NPSTC Comments in ET Docket 09-234, January 15, 2010 at pages 5 and 6.

for addressing potential deployment of TETRA technology in public safety spectrum through a rulemaking process.

On April 26, 2011 the Commission issued a combined Notice of Proposed Rulemaking regarding proposed rules relating to TETRA equipment certification and operation, and an Order which granted in part a request for waiver by the TETRA Association, pending outcome of the rulemaking proceeding. The Commission granted the waiver of sections 90.209 and 90.210 of the rules concerning authorized bandwidth and emission limits, subject to certain conditions. The waiver allows certification of TETRA equipment that does not meet current mask or bandwidth requirements in the rules and allows its deployment in the industrial business channels of the 450-470 MHz band and the ESMR channels in the 800 MHz band.

Potential operation in public safety spectrum is addressed in the NPRM, not the waiver request.[3] Proposed rules in the NPRM would expand allowed deployment of equipment such as TETRA with an authorized bandwidth up to 22 kHz in the 406-512 MHz band and the entire 806-824/851-869 MHz band spectrum, including NPSPAC and other public safety channels. However as part of the NPRM, the Commission requested comments on the impact to public safety interoperability and on potential near-far interference.

The Commission, the Department of Homeland Security, the public safety community, Congress and the industry have all emphasized the increased importance of interoperability for public safety communications. For example, in its recent *Third Report and Order* and *Fourth Further Notice of Proposed Rulemaking* on the 700 MHz band the Commission stated:

> It has been almost ten years since the tragic events of September 11, 2001, and more than five years since Hurricane Katrina devastated the Gulf Coast. During those horrific events, and

[3] NPSTC did request clarification that in granting the waiver, the Commission did not intend to authorize operation in the 821-824/866-869 MHz band segment still being used by public safety in a number of areas pending completion of 800 MHz rebanding. Request for Clarification, submitted May 26, 2011

others, it became clear that the lack of a nationwide interoperable public safety network hampered rescue efforts and the overall effectiveness of public safety operations.[4]

The Commission's rules currently include provisions for interoperability that equipment operating in the public safety spectrum must meet. For example, the rules require equipment certified and marketed for public safety operation in the 806-809/851-854 MHz band to be capable of being programmed for operation on the five mutual aid channels in the 806-824/851-869 MHz band and the proceeding in GEN. Docket 87-112 referenced in the rules established the practice of conducting such mutual aid operation in the analog mode.[5] Similarly, Section 90.203(j) includes requirements that mobile and portable transmitters designed to transmit voice on public safety frequencies in the 450–470 MHz band be capable of operating on the nationwide public safety interoperability calling channel in that band.

The predominant equipment currently in the U.S. public safety bands available from multiple manufacturers incorporates P25 digital and/or an analog technology mode.[6] While the Commission did not propose to modify the rules to include TETRA in the 700 MHz narrowband spectrum where P25 is required by rule as the interoperability mode in the band, most radios being provided in the 800 MHz spectrum today also are capable of being programmed to operate in the 700 MHz narrowband spectrum.

It is not clear how operation of TETRA digital trunked radio equipment in public safety spectrum in the U.S. would avoid exacerbating interoperability, or how TETRA equipment would meet the Commission's current requirements in the NPSPAC 800 MHz and 450-470 MHz bands.

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[4] *Third Report and Order* and *Fourth Further Notice of Proposed Rulemaking, PS Docket No. 06-229, released January 26, 2011, at paragraph 1.*

[5] See Sections 90.203(i) and 90.617(a)(1) of the rules and Report and Order *In the Matter of Development and Implementation of a Public Safety National Plan and Amendment of Part 90 to Establish Service Rules and Technical Standards for Use of the 821-824/866-869 MHz Bands by the Public Safety Services*, GEN Docket 87-112, released December 18, 1987.

[6] For manufacturers who provide P25 equipment, see http://www.project25.org/images/stories/ptig/docs/P25_PTIG_Member_List_2011_03_v0.pdf Also, analog technology has been readily available from multiple manufacturers for a number of years.

The Commission has also received recent requests from the critical infrastructure industries (CII) in connection with the proposed broadband nationwide network that emphasize the benefits of CII interoperability with public safety.[7] While public safety operations are NPSTC's primary focus, we also note that deployment of TETRA equipment on CII channels could hamper CII interoperability with public safety in times of a crisis or a disaster.

In previous comments, NPSTC expressed concern that TETRA technology typically uses a low elevation, cellular-type architecture that could cause near-far interference to public safety high-site systems. In the NPRM, the Commission indicated sensitivity to the complex issues surrounding the deployment of different system architectures and requested comments on whether any restriction should be placed on the use of TETRA technology with low elevation cellular-type architecture.

To the extent that TETRA technology would be deployed in a low-site cellularized configuration and interleaved with high-site systems, NPSTC is concerned about the potential for near/far interference. Previous deployment of low-site systems has proven to be an interference problem and a significant burden to resolve. After more than 5 years and over $2B expended, the Commission, the public safety community, and the industry are still working hard to complete 800 MHz rebanding to resolve these problems. NPSTC believes we should all learn from that experience and not embark on a path with a similar likelihood of interference that would be extremely time-consuming and costly to resolve after-the-fact.

Conclusion

NPSTC believes enabling single-mode TETRA technology in the entire 406-512 and 806-824/851-869 MHz as proposed in the NPRM would hamper public safety interoperability. Further, NPSTC opposes placing systems with low-site system architectures with the potential to cause near-

[7] For example, see Comments of the Utilities Telecom Council in PS Docket 06-229, submitted April 11, 2010.

far interference in the public safety spectrum, given the experience with 800 MHz rebanding.

Respectfully submitted,

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June 27, 2011